

<b>Requisition #:</b>	9900001	<b>Practitioner:</b>	NO PHYSICIAN
<b>Patient Name:</b>	Report Sample	<b>Date of Collection:</b>	12/01/2022
<b>Date of Birth:</b>	03/09/1960	<b>Patient Age:</b>	62
<b>Patient Sex:</b>	F	<b>Time of Collection:</b>	10:00 AM
		<b>Report Date:</b>	05/21/2024



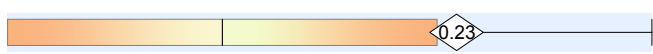
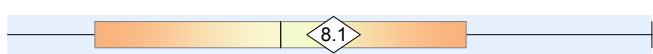
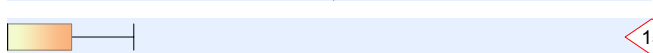
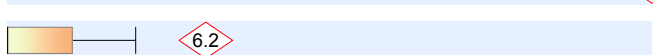
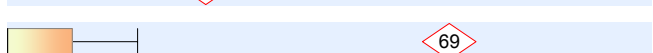
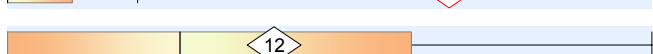
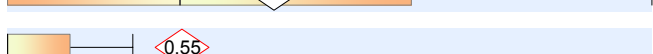


## Organic Acids Test - Nutritional and Metabolic Profile

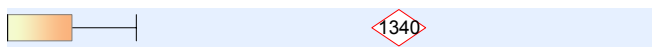
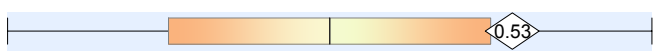
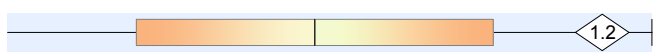
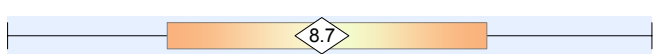
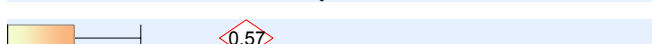
Metabolic Markers in Urine	Reference Range (mmol/mol creatinine)	Patient Value	Reference Population - Females Age 13 and Over
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### Intestinal Microbial Overgrowth



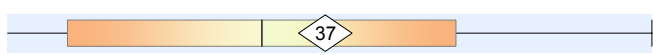
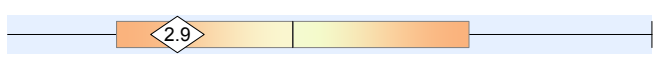
#### Yeast and Fungal Markers

1 Citramalic	≤ 3.6	1.6	
2 5-Hydroxymethyl-2-furoic (Aspergillus)	≤ 14	14	
3 3-Oxoglutaric	≤ 0.33	0.23	
4 Furan-2,5-dicarboxylic (Aspergillus)	≤ 16	8.1	
5 Furancarboxylglycine (Aspergillus)	≤ 1.9	<b>H</b> 15	
6 Tartaric (Aspergillus)	≤ 4.5	<b>H</b> 6.2	
7 Arabinose	≤ 29	<b>H</b> 69	
8 Carboxycitric	≤ 29	12	
9 Tricarballic (Fusarium)	≤ 0.44	<b>H</b> 0.55	

#### Bacterial Markers

10 Hippuric	≤ 613	<b>H</b> 1,340	
11 2-Hydroxyphenylacetic	0.06 - 0.66	0.53	
12 4-Hydroxybenzoic	≤ 1.3	1.2	
13 4-Hydroxyhippuric	0.79 - 17	8.7	
14 DHPPA (Beneficial Bacteria)	≤ 0.38	<b>H</b> 0.57	

#### Clostridia Bacterial Markers

15 4-Hydroxyphenylacetic (C. difficile, C. stricklandii, C. lituseburense & others)	≤ 19	15	
16 HPHPA (C. sporogenes, C. caloritolerans, C. botulinum & others)	≤ 208	162	
17 4-Cresol (C. difficile)	≤ 75	37	
18 3-Indoleacetic (C. stricklandii, C. lituseburense, C. subterminale & others)	≤ 11	2.9	

This test was developed, and its performance characteristics determined by Mosaic Diagnostics Laboratory. It has not been cleared or approved by the US Food and Drug Administration, however, does comply with CLIA regulations for clinical use.

The results should be interpreted in conjunction with the complete clinical picture, given patient history and presentation, and at the discretion of the medical provider.

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**Oxalate Metabolites**

19	Glyceric	0.77 - 7.0	H 7.6	
20	Glycolic	16 - 117	89	
21	Oxalic	6.8 - 101	H 224	

**Glycolytic Cycle Metabolites**

22	Lactic	≤ 48	22	
23	Pyruvic	≤ 9.1	2.4	

**Mitochondrial Markers - Krebs Cycle Metabolites**

24	Succinic	≤ 9.3	H 18	
25	Fumaric	≤ 0.94	0.82	
26	Malic	0.06 - 1.8	1.7	
27	2-Oxoglutaric	≤ 35	11	
28	Aconitic	6.8 - 28	14	
29	Citric	≤ 507	H 610	

**Mitochondrial Markers - Amino Acid Metabolites**

30	3-Methylglutaric	≤ 0.76	0.35	
31	3-Hydroxyglutaric	≤ 6.2	5.4	
32	3-Methylglutaconic	≤ 4.5	1.4	

**Neurotransmitter Metabolites**

**Phenylalanine and Tyrosine Metabolites**

33	Homovanillic (HVA) <i>(dopamine)</i>	0.80 - 3.6	3.5	
34	Vanillylmandelic (VMA) <i>(norepinephrine, epinephrine)</i>	0.46 - 3.7	2.5	
35	HVA / VMA Ratio	0.16 - 1.8	1.4	
36	Dihydroxyphenylacetic (DOPAC) <i>(dopamine)</i>	0.08 - 3.5	H 4.6	
37	HVA/ DOPAC Ratio	0.10 - 1.8	0.77	

**Tryptophan Metabolites**

38	5-Hydroxyindoleacetic (5-HIAA) <i>(serotonin)</i>	≤ 4.3	1.9	
39	Quinolinic	0.85 - 3.9	2.4	
40	Kynurenic	≤ 2.2	1.4	

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**Pyrimidine Metabolites - Folate Metabolism**

41 Uracil	≤ 9.7	4.5	
42 Thymine	≤ 0.56	0.19	

**Ketone and Fatty Acid Oxidation**

43 3-Hydroxybutyric	≤ 3.1	1.7	
44 Acetoacetic	≤ 10	1.3	
45 Ethylmalonic	0.44 - 2.8	2.1	
46 Methylsuccinic	0.10 - 2.2	<b>H</b> 4.1	
47 Adipic	0.04 - 3.8	2.0	
48 Suberic	0.18 - 2.2	<b>H</b> 3.2	
49 Sebacic	≤ 0.24	0.21	

**Nutritional Markers**

<b>Vitamin B12</b>			
50 Methylmalonic *	≤ 2.3	<b>H</b> 2.8	
<b>Vitamin B6</b>			
51 Pyridoxic (B6)	≤ 34	3.7	
<b>Vitamin B5</b>			
52 Pantothenic (B5)	≤ 10	<b>H</b> 23	
<b>Vitamin B2 (Riboflavin)</b>			
53 Glutaric *	0.04 - 0.36	<b>H</b> 0.89	
<b>Vitamin C</b>			
54 Ascorbic	10 - 200	<b>L</b> 0.56	
<b>Vitamin Q10 (CoQ10)</b>			
55 3-Hydroxy-3-methylglutaric *	0.17 - 39	29	
<b>Glutathione Precursor and Chelating Agent</b>			
56 N-Acetylcysteine (NAC)	≤ 0.28	0.04	
<b>Biotin (Vitamin H)</b>			
57 Methylcitric *	0.19 - 2.7	1.1	

\* A high value for this marker may indicate a deficiency of this vitamin.

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**Indicators of Detoxification**

**Glutathione**



**Methylation, Toxic exposure**



**Ammonia Excess**



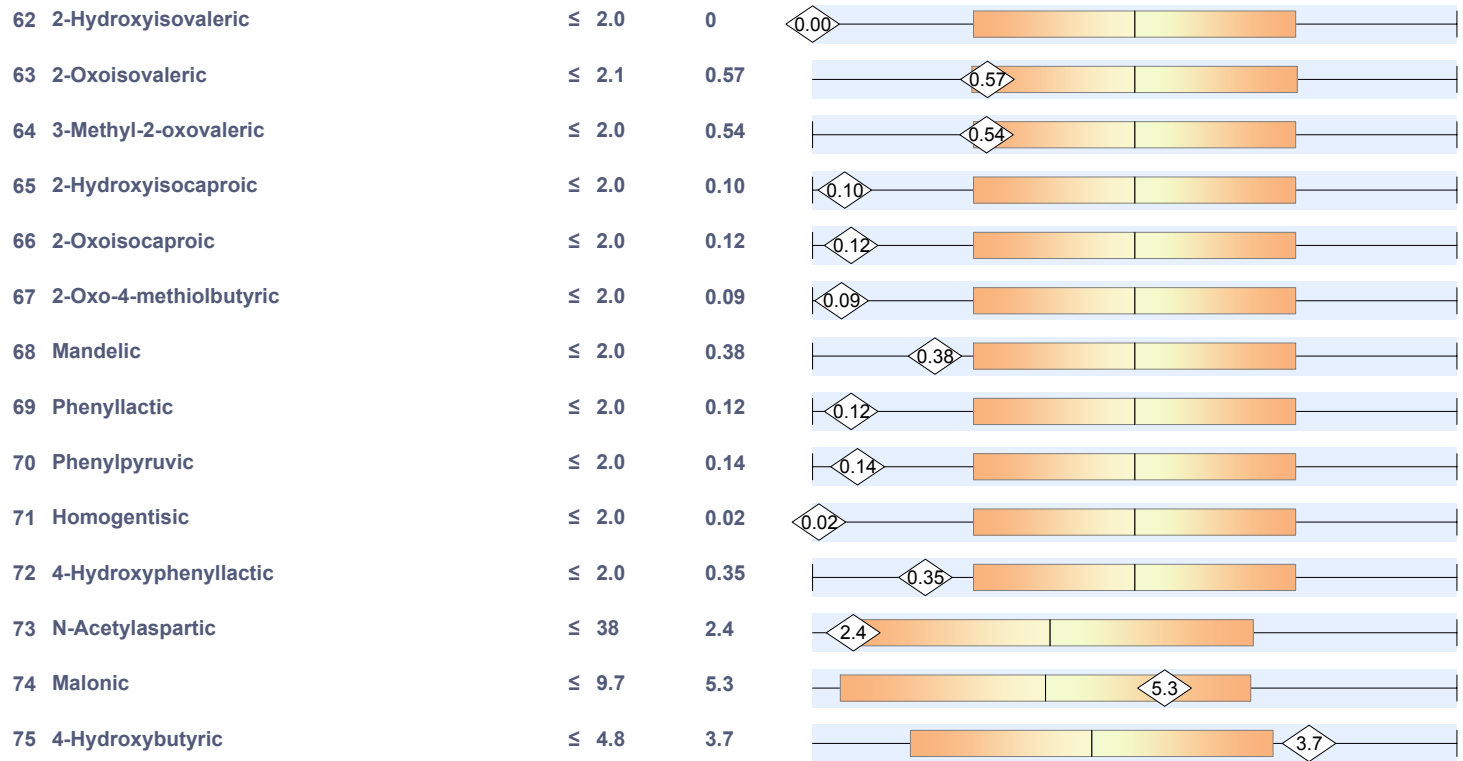
**Aspartame, salicylates, or GI bacteria**



\* A high value for this marker may indicate a Glutathione deficiency.  
 \*\* High values may indicate methylation defects and/or toxic exposures.

**Amino Acid Metabolites**

Low values are not associated with inadequate protein intake and have not been demonstrated to indicate specific amino acid deficiencies.



**Mineral Metabolism**

